

## CLAIMS

We claim:

- 5           1.       A method for comparing file tree descriptions comprising:  
obtaining a first file structure;  
obtaining a second file structure;  
comparing said first file structure to said second file structure; and  
generating one or more changes that transform said first file structure to said  
10       second file structure.
2.       The method of claim 1 wherein said comparing further comprises:  
recursively walking said first file structure.
- 15       3.       The method of claim 1 wherein said changes comprise a sequence log of  
changes.
4.       The method of claim 1 wherein said first file structure is a file tree index.
- 20       5.       The method of claim 1 wherein said second file structure is a file tree  
index.
6.       The method of claim 1 wherein said comparing further comprises:  
comparing one or more folders of said first file structure along with its children  
25       with a corresponding folder along with its children in said second file structure.
7.       The method of claim 3 further comprising:  
optimizing said sequenced log of changes.

8. The method of claim 7 wherein said optimizing further comprising:  
transforming a plurality of operations in said sequenced log of changes to a single  
operation.

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9. A file tree comparator comprising:  
a first file structure configured to be obtained;  
a second file structure configured to be obtained;  
a comparator configured to compare said first file structure to said second file  
structure; and  
to generate one or more changes that transform said first file structure to said  
second file structure.

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10. The file tree comparator of claim 9 wherein said step to compare further  
comprises:  
to recursively walk said first file tree structure.

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11. The file tree comparator of claim 9 wherein said changes comprise a  
sequence log of changes.

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12. The file tree comparator of claim 9 wherein said first file structure is a file tree  
index.

13. The file tree comparator of claim 9 wherein said second file structure is a file  
tree index.

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14. The file tree comparator of claim 9 wherein said step to compare further  
comprising:

to cause said file tree comparator to compare one or more folders of said first file structure along with its children with a corresponding folder along with its children in said second file structure.

5            15.     The file tree comparator of claim 11 further comprising:  
to optimize said sequenced log of changes.

10           16.     The file tree comparator of claim 15 wherein said step to optimize further comprising:  
to transform a plurality of operations in said sequenced log of changes to a single operation.

15           17.     A computer program product comprising:  
a computer usable medium having computer readable program code embodied therein for comparing file tree descriptions, said computer program product comprising:  
computer readable code configured to cause a computer to obtain a first file structure;  
computer readable code configured to cause a computer to obtain a second file structure;  
20           computer readable code configured to cause a computer to compare said first file structure to said second file structure; and  
computer readable code configured to cause a computer to generate one or more changes that transform said first file structure to said second file structure.

25           18.     The computer program product of claim 17 wherein said step to compare further comprising:

computer readable code configured to cause a computer to recursively walk said first file structure.

5 19. The computer program product of claim 17 wherein said changes comprise a sequence log of changes.

20. The computer program product of claim 17 wherein said first file structure is a file tree index.

10 21. The computer program product of claim 17 wherein said second file structure is a file tree index.

22. The computer program product of claim 17 wherein said step to compare further comprising:

15 computer readable code configured to compare one or more folders of said first file structure along with its children with a corresponding folder along with its children in said second file structure.

20 23. The computer program product of claim 18 further comprising:  
computer readable code configured to optimize said sequenced log of changes.

24. The computer program product of claim 23 wherein said step to optimize further comprising:  
computer readable code configured to transform a plurality of operations in said  
25 sequenced log of changes to a single operation.